

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :
Kohei Tatsumi et al. :
Serial No.: To be assigned : Art Unit: To be assigned
Filed: Herewith : Examiner: To be assigned
For: SPHERICAL : Atty Docket: 1776/00057
SEMICONDUCTOR DEVICE :
AND METHOD FOR :
FABRICATING THE SAME :
:

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to initial examination of the above-identified divisional application, please amend the above-captioned case as follows.

IN THE SPECIFICATION

Kindly amend the specification as follows:

On page 1, before the first sentence, insert the section:

CROSS-REFERENCE TO RELATED APPLICATION

The present application is a divisional of U.S. patent application Serial No. 09/350,125, filed July 9, 1999.--

Please amend the specification as shown on the attached copy of page 24. A substitute paragraph containing these changes is also enclosed.

IN THE CLAIMS

Please cancel claims 1-14 and amend claim 15 to read as follows:

15. (Amended) A method for fabricating a spherical semiconductor device having spherical bumps on surface electrodes of a spherical semiconductor element, comprising the steps of:

temporarily arranging conductive balls for forming said spherical bumps, on an arrangement substrate at positions respectively corresponding to said surface electrodes; and

transferring said conductive balls onto said surface electrodes to join the electrodes.

R E M A R K S

The present application is a divisional application of U.S. patent application Serial No. 09/350,125, filed July 9, 1999.

Claims 1-14 have been cancelled as they are being prosecuted in the parent application, wherefor the claims presently in this case are claims 15-21.

Claim 15 has been amended to correct a minor typographical omission.

The specification has been amended to include reference to the parent application and to effect the change made in the parent application on page 24.

None of these amendments is believed to involve any new matter. Accordingly, it is respectfully requested that the foregoing amendments be entered, that the application as so amended receive an examination on the merits, and that the claims as now presented receive an early allowance.

DEPOSIT ACCOUNT AUTHORIZATION

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are

necessary, then such extensions of time are hereby petitioned under 37 CFR § 1.136(a), and any fees required for consideration of this paper, including fees for net addition of claims, are hereby authorized to be charged to our Deposit Account No. 22-0185.

Respectfully submitted,

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Date: 5/9/01

AMENDMENTS TO THE SPECIFICATION

Page 1, before the first sentence:

CROSS-REFERENCE TO RELATED APPLICATION

The present application is a divisional of U.S. patent application Serial No. 09/350,125, filed July 9, 1999.--

Page 24, third paragraph:

Referring to Fig. 14, the taper angle α at the opening portion 121a of each arrangement hole 121 is designed to be within the range of preferably $10^\circ < \alpha < 60^\circ$, more preferably, $30^\circ - \theta < \alpha < 60^\circ - \theta$ ($\theta < 20^\circ$).

AMENDMENTS TO THE CLAIMS

15. (Amended) A method for fabricating a spherical semiconductor device having spherical bumps on surface electrodes of a spherical semiconductor element, comprising the steps of:

temporarily arranging conductive balls for forming said spherical bumps, on an arrangement substrate at positions respectively corresponding to said surface electrodes; and

transferring said conductive balls onto said surface electrodes to join the electrodes.

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